

RISK ASSESSMENT AND RISK MANAGEMENT PLAN

Risk Description	Rating	Mitigation Measures	Responsibility
Technical and Operational			
Lack of coordination with government agencies and among contractors and developers	M	The PMO will be set up directly under the office of the mayor to facilitate coordination between municipal agencies. The steering committee will include senior officials from all key related ministries. The procurement and construction schedule will be guided by the overarching infrastructure, and the architectural detailed design and implementation plan for each eco-district.	DBM, MOF, and MUB ^a
Community's willingness to participate is low, leading to delay in infrastructure implementation	L	The feasibility study confirmed the high community demand for the project. Also, willingness to participate will be assessed three times (during identification, feasibility, detailed design), and will ensure the high willingness to participate of the community in the selected subprojects.	MUB and PMO
Green and energy efficiency features of the buildings are poorly implemented	M	Financial support driven by the EDAF and the Green Building Facility will provide incentives to ensure that the contractor and developer follow the technical specifications regarding the green features of the building and the eco-districts. Close construction supervision will be carried out to ensure the quality of construction works.	DBM, MUB, PMO, PIU, and developers
Voluntary land swapping agreements and detailed design not enforced by selected private firms	M	Bidding documents for developers will reflect detailed design parameters and specifications prepared by the PMO for each eco-district. Penalties will apply if the bidding document detailed design specifications are not followed.	DBM, MUB, PMO, and PIU
Sector policy reforms are not implemented on a timely basis, and not conclusive	L	All sector reforms are in the agendas of the government and its agencies. The time allowed for most reforms is 2–3 years, which is enough for the PMO/PIU and the policy reform consulting services to engage in policy dialogue and realize the reforms.	DBM, ERC, FRC, MCUD, MUB, and NOSK
Financial and Procurement			
Irregularities in procurement and lack of financial management capacity	M	Financial management and procurement capacity assessments have concluded that appropriate control mechanisms are in place and contain additional measures to reduce risks, particularly the (i) implementation of a financial management improvement plan; and (ii) training on ADB procurement, disbursement, reporting, and other procedures during project implementation.	DBM, MUB, PMO, PIU, and project implementation and management support consultants
Financial sustainability is adversely affected by lack of financial management skills and insufficient utility tariff adjustments	M	Consultants will provide training and capacity development in sustainable O&M of the new facilities, tariff setting, and financial management. Tariffs will be adjusted over time to cover the O&M costs, and the government will cover funding gaps if tariff revenues are insufficient.	MUB, PMO, and capacity building consultants

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O&M resources for public space, housing, and renewable energy equipment are inadequate	M	Adequate O&M resources have been provisioned in the financing plan during the project implementation period. Cross-subsidy mechanisms and a detailed responsibility plan will be implemented at each eco-district level to ensure sustainable O&M. Photovoltaic panel O&M cost will be initially covered by the Smart Monitoring and Control Center budget, and then by private sector O&M contracts.	MUB and PMO
Adverse economic shocks such as severe winters or collapsing commodity prices render the project financially not feasible	M	Financial projections were analyzed based on ADB's economic scenarios for Mongolia, with relevant contingencies included. The project is resilient to expected levels of economic shocks, with costs and affordability rising or falling at similar levels. Each project implementation phase will review and adjust the financial and design parameters for the subprojects, thus adapting to the socioeconomic context. This will be closely monitored by ADB and MUB.	ADB and MUB
Lack of availability of loans from commercial banks, and equity contribution by developers	M	Due diligence and consultations regarding banking and private sector capacity will be carried out at the beginning of each implementation phase, with discussions held with the banking and construction sectors to ensure the appetite for and availability of loans and equity. The design and size of the eco-districts could be modified to cope with economic and financial challenges and ensure their financial feasibility. Stringent due diligence will be carried out before selection by the PIU and the commercial banks.	DBM, MUB, PIU, commercial banks, and PMO
Insufficient capacity of the construction sector to mobilize personnel to deliver multiple simultaneous projects, raising bid prices and reducing bidder participation	L	Private developers will be consulted during detailed design preparation to ensure the attractiveness of the tender documents and compliance with actual private sector capacities.	MUB, PMO, and PIU
Other			
Political change impacts political support to the project	L	Providing municipal infrastructure and facilities in <i>ger</i> areas and affordable housing for all residents in Ulaanbaatar were identified as essential priorities by both municipal and state governments. Comprehensive and meaningful consultations at all institutional levels will guarantee widespread support among policymakers.	MUB and PMO
Commercial banks are unwilling to establish new mortgage products with lower interest rates to make the sale of units affordable to target households	L	The DBM and the Asset Management Company of DBM will hold multiple preliminary discussions with the banks to ensure their interest in moving ahead. In addition, the capital for such mortgages will be made available to the banks through the EDAF at preferential rates.	DBM, MUB, and PIU
Unclear and tedious screening and	M	Well-defined parameters based on income, property, taxes, and addresses will be further developed during	DBM, MUB, and PIU

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selection parameters of beneficiaries		implementation and will be enforced at commercial bank level through the capacity building and auditing process.	
Commercial banks are unwilling to underwrite mortgages for targeted households	M	Meaningful consultations and discussions with the commercial banks will focus on applying appropriate underwriting standards to the new mortgage products developed specifically for the project.	DBM, MUB, and PIU
Lack of participation from land owners and developers	L	Land owners and private developers will be consulted during the subproject preparation and detailed design stages to ensure their willingness to participate, and to ensure bidding documents are in line with private sector capacity.	DBM, MUB, PIU, and PMO
Appetite for housing investment in the targeted areas is low	M	Real estate market analysis will be carried out for each implementation phase and each subproject to ensure the business viability of housing units produced. A targeted mortgage program for affordable and market-rate housing units be available. Marketing and branding support will be provided to the developers for the sale of housing.	MUB and PMO
Overall	Moderate		

ADB = Asian Development Bank, DBM = Development Bank of Mongolia, EDAF = Eco-District and Affordable Housing Fund, ERC = Energy Regulatory Commission, FRC = Financial Regulatory Commission of Mongolia, L = low, M = moderate, MCUD = Ministry of Construction and Urban Development, MOF = Ministry of Finance, MUB = Municipality of Ulaanbaatar, NOSK = Ulaanbaatar Housing Organization, O&M = operation and maintenance, PIU = project implementation unit of Asset Management Company of DBM, PMO = project management office.

^a MUB is also known as the Governor's Office of the Capital City Ulaanbaatar.

Source: Asian Development Bank.